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REMARKS

The marked up amended claims are shown above. A clean copy of the claims is attached.

Claim 13 was rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification, specifically the viewing angle within a range of 25E to 60E from normal. First of all, the E was a typographical error and should be a degree symbol or word. Secondly, claim 13 has been amended to make the viewing angle of more than 20 degrees off of normal which is fully supported by the curve in Figure 8 and the description on page 14, lines 4 through 6.

Claims 5 and 13 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the applicant regards as the invention. The Examiner indicated that it was confusing and unclear whether the first polarization is the same as the claimed first polarization orientation in claim 1. Claim 5 has been amended to recite the first polarization orientation to be consistent with independent claim 1. Claim 13 was rejected because the Examiner did not know what "25E to 60E" meant. Claim 13 has been amended as discussed above.

Claims 1-3, 5, 7, 12-15, and 17-23 were rejected under 35 USC 102(b) as being anticipated by Larson. In particular, the Examiner states that the '388 patent discloses "a polarization rotating element (e.g., a retarder 108) for rotating light (according to the property of a retarder)". The applicant respectfully disagrees with the examiner's conclusion, as this reference does not disclose the same elements as the present invention. Specifically, in the '388 patent, the retarder 108 in Figure 4 is clearly defined as a quarterwave retarder (see column 10, lines 6-10). Quarterwave retarders do not rotate light between a first polarization orientation and a second polarization orientation,

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as is called for in the present invention and associated claims. As described in the present specification, these orientations refer to orientation of linear polarization (see, for example, page 17, lines 10-16). Rather, quarterwave retarders can be used to convert between a first polarization orientation and circularly polarized light, which has no defined linear polarization orientation.

The '388 patent does use the term "polarization rotation means" (column 10, line 26), but one skilled in the art will recognize that this is in reference to the combination of quarterwave retarder 108 and mirror 105. This combination functions in a reflective manner, not only rotating the polarization but also reversing the direction of propagation of the light.

In the present invention; however, the polarization rotating elements described (page 12, line 4 through page 13, line 4) all rotate polarization in a transmissive mode, as would be recognized by one skilled in the art. Further, all of the embodiment descriptions and figures clearly show transmissive polarization rotating elements. Reflective mode polarization rotating means are not taught and are not compatible with the invention described.

The embodiment of Figure 7 does include a reflective or backscattering element, but still is not anticipated by 5,751,388. The present specification clearly states that light rays "pass through polarization rotation element 730 (page 19, lines 21-24) and are then reflected or backscattered by optical element 704." Thus, it is clear that even in the reflective system disclosed, the polarization rotating element is still transmissive. The combination of a quarterwave retarder and a mirror would not reproduce the functionality or benefits of the embodiment of Figure 7.

To clarify this distinction and the novelty and inventive step over the prior art reference, claim 1 has been amended to specify a "transmissive" polarization rotating

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element. This amendment is supported by the description and the drawings as set forth above. To further define the invention, claim 1 has also been amended to specify that the display is a direct view display (see page 14, lines 4-6, "the display may be utilized in a direct view mode"). Thus, these claims are now allowable.

Claims 4, 6, 8-11 and 16 were rejected under 35 USC 103(a) as being unpatentable over Larson. As previously discussed, the polarization rotation means in the '388 patent is totally different and distinct from the polarization rotating element in the present invention. Due to the allowability of independent claims 1, 17, 19, and 21, these dependent claims are also allowable.

With regard to the examiner's discussion of claim 6, the applicant states that the purpose for placing a polarization rotating element in the front is to further broaden the viewing envelope in the major axis 322 of the desired viewing envelope 320 (page 15, lines 1-5). The polarization rotating element rotates the polarization such that the polarization axis aligns with the major axis 322. As described on page 9, line 22 through page 10, line 1, when there are polarization-sensitive reflections at air interfaces, higher transmittance is obtained when the transmitted light approaches Brewster's angle and the polarization axis of the light falls in or near the plane of incidence/reflection. The embodiment of Figure 3 includes polarization rotating elements in both front and back, since benefit is obtained in both instances.

In the discussion of claims 8-11 and 16, the examiner states that "Applicant has not disclosed the polarization rotating element being located between the polarized display panel and the optical film ... is for any purpose ...". Applicant respectfully points out that the placement of the polarization rotating element between the polarized display panel and the optical film is what allows, for example, the pass axis 206 of rear element 204 to be "oriented to a position optimizing the luminance envelope 210 ... to more closely conform to the desired envelope 220 (see page 11, line 22 through page 12, line

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2), yielding optimal performance at wide viewing angles. This freedom to reorient and optimize the luminance envelope relative to the desired viewing envelope is a key aspect of the invention. This is true whether the optical element affecting the luminance envelope is a prepolarizer, a layer of glass, a diffuser, an air interface or other material referred to in the specification, and whether it is in the rear or front of the display panel.


No new claims were added, therefore, no fees are required. The Commissioner is authorized to charge any fees or credit any overpayment under 37 CFR §§ 1.16 and 1.17 which may be required during the entire pendency of the application to Deposit Account No. 01-2335.

Having responded to each and every objection and rejection, the claims at issue are allowable and an allowance is respectfully requested. Should the Examiner have any suggestions to expedite this matter, he is invited to call the undersigned collect.

Respectfully submitted,

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